

intended wearer's foot when inside the shoe;

not shown
or disclosed
a sole midtarsal area at a location substantially corresponding to the area between the heel
and the forefoot of the intended wearer's foot when inside the shoe;

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a midsole component defined by an inner midsole surface and an outer midsole surface,
said midsole component extending to the sole middle portion and at least one sole side
portion, as viewed in a frontal plane cross-section when the shoe sole is upright and in an
unloaded condition,

said midsole component having three different firmnesses or densities;

the sole surfaces of the sole for an athletic shoe defining a sole medial side, a sole
lateral side, and a sole middle portion between the sole medial and lateral sides,

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the outer midsole surface of one of the lateral and medial sides comprising a
concavely rounded portion located in at least one shoe sole side, and extending at least below a
level of a lowest point of the midsole inner surface, as viewed in a shoe sole frontal plane cross-
section when the shoe sole is upright and in an unloaded condition, the concavity of the
concavely rounded portion of the outer midsole surface existing with respect to an inner section
of the midsole component directly adjacent to the concavely rounded portion of the outer midsole
surface,

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the inner midsole surface of the side of the shoe sole which has a concavely
rounded portion of the outer midsole surface comprising a convexly rounded portion, as viewed
in the shoe sole frontal plane cross-section when the shoe sole is upright and in an unloaded
condition, the convexity of the convexly rounded portion of the inner midsole surface existing
with respect to a section of the midsole component directly adjacent to the convexly rounded
portion of the inner midsole surface; and

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a portion of a sole side located between the convexly rounded portion of the sole
inner surface and the concavely rounded portion of the sole outer surface having a thickness ^{loc b}
measured from the sole inner surface ^{loc b} to the sole outer surface that is greater than a least thickness
of the sole in the sole middle portion measured from the sole inner surface to the sole outer

surface, as viewed in the frontal plane cross-section when the shoe sole is upright and in an unloaded condition;

the sole having a lateral sidemost section defined by that portion of said sole located outside of a straight vertical line extending through the shoe sole at a lateral sidemost extent of the inner surface of the midsole component, as viewed in a shoe sole frontal plane cross-section when the shoe sole is upright and in an unloaded condition;

the sole having a medial sidemost section defined by that portion of said sole located outside of a straight vertical line extending through the shoe sole at a medial sidemost extent of the inner surface of the midsole component, as viewed in the shoe sole frontal plane cross-section when the shoe sole is upright and in an unloaded condition;

at least a part of the midsole component extends into the sidemost section of at least one shoe sole side, as viewed in the shoe sole frontal plane cross-section when the shoe sole is upright and in an unloaded condition; and

a the part of the midsole component that extends into the sidemost section of the at least one shoe sole side further extends to above a lowermost point of the inner midsole surface of the midsole component on the same sole side, as viewed in the shoe sole frontal plane cross-section when the shoe sole is upright and in an unloaded condition.

22. The sole as set forth in claim 21, wherein the midsole component comprises portions with first, second and third firmnesses or densities, the portion having the first firmness or density being located adjacent a side edge of the shoe sole and the portion having the second firmness or density being located adjacent to a center line of the shoe sole, all as viewed in the frontal plane cross-section when the shoe sole is upright and in an unloaded condition, and

the first firmness or density is greater than the second firmness or density when the shoe sole is in an unloaded condition.

23. The sole as set forth in claim 21, wherein the midsole component comprises

portions of first, second and third firmnesses or densities, said portion of first firmness or density having a lesser firmness or density than said portion of second firmness or density, said portion of first firmness or density being located in a heel area of the shoe sole, and
said portion of second firmness or density being located adjacent said portion of first firmness or density.

24. The sole as set forth in claim 21, wherein both the sole lateral side and the sole medial side comprise a convexly rounded portion of the inner midsole surface portion and a concavely rounded portion of the outer midsole surface, as viewed in the shoe sole frontal plane cross-section when the shoe sole is upright and in an unloaded condition.

A 25. The shoe sole as set forth in claim 21, wherein said concavely rounded portion of the outer midsole surface extends down to near a lowest point of the outer midsole surface of the midsole component which is located in one of the shoe sole sides, as viewed in the shoe sole frontal plane cross-section when the shoe sole is upright and in an unloaded condition.

26. The sole as set forth in claim 21, wherein the midsole component comprises portions with first, second and third firmnesses or densities, and one of said portions of first and second firmness or density in the midsole component has a greater thickness in the sole side portion than a thickness of the same midsole component in the sole middle portion, as viewed in the shoe sole frontal plane cross-section when the shoe sole is upright and in an unloaded condition.

27. The shoe sole set forth in claim 21, wherein the concavely rounded portion of the outer midsole surface extends through a sidemost extent of the outer midsole surface located in the same sole side, as viewed in the shoe sole frontal plane cross-section when the shoe sole is upright and in an unloaded condition.

28. The sole as set forth in claim 21, wherein a first firmness or density portion of the midsole component having a first firmness or density forms at least part of the outer midsole surface of the midsole component, and a second firmness or density portion of the midsole component having a second firmness or density forms at least part of the inner midsole surface of the midsole component, all as viewed in the frontal plane cross-section when the shoe sole is upright and in an unloaded condition.

29. The shoe sole as set forth in claim 28, wherein the first firmness or density portion of the midsole component forms at least part of the outer midsole surface of the midsole part that extends into the sidemost section of the shoe sole side, as viewed in a frontal plane cross-section when the shoe sole is upright and in an unloaded condition.

A 30. The shoe sole as set forth in claim 29, wherein the first firmness or density portion of the midsole component forms substantially the entire concavely rounded portion of the outer midsole surface of the midsole part that extends into the sidemost section of the shoe sole side, as viewed in the frontal plane cross-section when the shoe sole is upright and in an unloaded condition.

31. The shoe sole as set forth in claim 28, wherein a second firmness or density portion of the midsole component forms substantially the entire inner midsole surface of the midsole component, as viewed in a frontal plane cross-section when the shoe sole is upright and in an unloaded condition.

32. The sole as set forth in claim 28, wherein the first firmness or density portion of the midsole component has a greater firmness or density than a second firmness or density portion of said midsole component.

33. The shoe sole as set forth in claim 21, wherein said concavely rounded portion of the outer midsole surface extends down to near a lowest point of the outer midsole surface in one of the lateral and medial sidemost sections of the shoe sole sides, as viewed in the shoe sole frontal plane cross-section when the shoe sole is upright and in an unloaded condition.

34. The shoe sole as set forth in claim 29, wherein the second firmness or density portion of the midsole component encompasses at least part of a centerline of the midsole component, as viewed in a frontal plane cross-section when the shoe sole is upright and in an unloaded condition.

a 35. The shoe sole as set forth in claim 28, wherein at least a part of a boundary between the first and second firmness or density portions of the midsole component is concavely rounded relative to a section of the second firmness or density portion of the midsole component adjacent to the boundary, as viewed in a frontal plane cross-section when the shoe sole is upright and in an unloaded condition.

36. The shoe sole as set forth in claim 28, wherein at least a part of a boundary between the first and second firmness or density portions of the midsole component is concavely rounded relative to a section of the first firmness or density portion of the midsole component adjacent to the boundary, as viewed in a frontal plane cross-section when the shoe sole is upright and in an unloaded condition.

37. A shoe sole as claimed in claim 21, wherein a thickness between an inner midsole surface of the midsole part which extends into the sidemost section of the shoe sole side, and an outer midsole surface of the midsole part which extends into the sidemost section of the shoe sole side increases gradually from a thickness at an uppermost point of each of said upper portions of the midsole

part to a lesser thickness at a location below the uppermost point of each said upper portion of the midsole part, said thickness being defined as the distance between a first point on the inner midsole surface of the midsole component and a second point on the outer midsole surface of the midsole component, said second point being located along a straight line perpendicular to a straight line tangent to the inner midsole surface of the midsole component at said first point, all as viewed in a frontal plane cross-section when the shoe sole is upright and in an unloaded condition.

38. The shoe sole as set forth in claim 28, wherein the frontal plane cross-section is located in a heel area of the shoe sole.

*not shown
over 1/2 length*
39. The shoe sole as set forth in claim 28, wherein the frontal plane cross-section is located in a forefoot area of the shoe sole.

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40. The shoe sole as set forth in claim 21, wherein the concavely rounded portion of the outer midsole surface extends down to near a lowermost point of the midsole component, as viewed in a frontal plane cross-section when the shoe sole is upright and in an unloaded condition.

41. The shoe sole as set forth in claim 21, wherein the concavely rounded portion of the outer midsole surface extends up to a level above the lowest point of the inner midsole surface of the midsole component, as viewed in a shoe sole frontal plane cross-section when the shoe sole is upright and in an unloaded condition.

42. The shoe sole as set forth in claim 21, wherein the concavely rounded portion of the outer midsole surface extends from an uppermost portion of the shoe sole side to a level below the lowest point of the inner midsole surface, as viewed in a shoe sole frontal plane cross-section when the shoe sole is upright and in an unloaded condition.

43. The shoe sole as set forth in claim 21, wherein the portions of the midsole component having three different firmnesses or densities can be viewed in a single frontal plane cross-section when the shoe sole is upright and in an unloaded condition.

44. The shoe sole as set forth in claim 43, wherein the thickness of the portion of the midsole part which extends into the sidemost section of the at least one shoe sole side increases from a first thickness at an uppermost point on the midsole part to a greater thickness at a portion of said midsole part below said uppermost point, as viewed in a shoe sole frontal plane cross-section when the shoe sole is upright and in an unloaded condition; and

A 1 the thickness of the midsole part being defined as the length of a line starting at a starting point on the inner midsole surface of the midsole component and extending to an outer midsole surface of the midsole component in a direction perpendicular to a line tangent to the inner midsole surface of the midsole component at the starting point, as viewed in a shoe sole frontal plane cross-section when the shoe sole is upright and in an unloaded condition.

45. The shoe sole as set forth in claim 21, wherein a midsole portion of greatest firmness or density is located adjacent a side edge of the shoe sole, a midsole portion of least firmness or density is located adjacent a centerline of the shoe sole, and a midsole portion of intermediate firmness or density is located between the midsole portion of greatest firmness or density and the midsole portion of least firmness or density, as viewed in a frontal plane cross-section when the shoe sole is upright and in an unloaded condition.

46. The shoe sole as set forth in claim 45, further comprising a second midsole portion of greatest firmness or density adjacent a second side edge of the shoe sole and a second midsole portion of intermediate firmness or density located between the second midsole portion of greatest firmness or density and the midsole portion of least firmness or density, as viewed in a